## SEQUENCE LISTING

- (1) GENERAL INFORMATION:
  - (i) APPLICANT: Ginns, Edward I. Egeland, Janice A. Paul, Steven M.
  - (ii) TITLE OF INVENTION: Susceptibility Genes for Bipolar Affective Disorder
  - (iii) NUMBER OF SEQUENCES: 64
  - (iv) CORRESPONDENCE ADDRESS:
    - (A) ADDRESSEE: Townsend and Townsend and Crew
    - (B) STREET: Two Embarcadero Ctr, Suite 800
    - (C) CITY: San Francisco
    - (D) STATE: California
    - (E) COUNTRY: USA
    - (F) ZIP: 94111
    - (v) COMPUTER READABLE FORM:
      - (A) MEDIUM TYPE: Floppy disk

      - (B) COMPUTER: IBM PC compatible
        (C) OPERATING SYSTEM: PC-DOS/MS-DOS
        (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
  - (vi) CURRENT APPLICATION DATA:
    - (A) APPLICATION NUMBER: US Not yet assigned
    - (B) FILING DATE: Not yet assigned
    - (C) CLASSIFICATION:
  - (viii) ATTORNEY/AGENT INFORMATION:

    - (A) NAME: Smith, Timothy L.(B) REGISTRATION NUMBER: 35,367
    - (C) REFERENCE/DOCKET NUMBER: 015280-0248100
    - (ix) TELECOMMUNICATION INFORMATION:
      - (A) TELEPHONE: (415) 576-0200
      - (B) TELEFAX: (415) 476-0300
- (2) INFORMATION FOR SEQ ID NO:1:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 18 base pairs
    - (B) TYPE: nucleic acid
    - (C) STRANDEDNESS: single
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: DNA (genomic)
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

## CTCCAGCCTG GGTCACTA

(2) INFORMATION FOR SEQ ID NO:2:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 25 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

18

| (ii) MOLECULE TYPE: DNA (genomic)  |    |
|--|----|
| (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:  |    |
| CTAATGCATG ACAATAATAT TTCCA  | 25 |
| (2) INFORMATION FOR SEQ ID NO:3:   |    |
| <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 20 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
| (ii) MOLECULE TYPE: DNA (genomic)  |    |
| (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:  |    |
| ACCTAAGCGA CTGCCTAAAC  | 20 |
| (2) INFORMATION FOR SEQ ID NO:4:   |    |
| <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 20 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
| (ii) MOLECULE TYPE: DNA (genomic)  | ,  |
| (xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:  |    |
| CTTGTTCATC TGCCTTGTGC  | 20 |
| (2) INFORMATION FOR SEQ ID NO:5:   |    |
| <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 22 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
| (ii) MOLECULE TYPE: DNA (genomic)  |    |
| (xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:  |    |
| AGTCTCATGT GACACAAGGC AG   | 22 |
| (2) INFORMATION FOR SEQ ID NO:6:   |    |
| (i) SEQUENCE CHARACTERISTICS:  (A) LENGTH: 22 base pairs  (B) TYPE: nucleic acid  (C) STRANDEDNESS: single  (D) TOPOLOGY: linear   |    |

(ii) MOLECULE TYPE: DNA (genomic)

|      | (xi)   | SEQUENCE DESCRIPTION: SEQ ID NO:6:   |    |
|------|--------|--|----|
| TGT  | AACCT  | GG AAGTAAGGCA TG   | 22 |
| (2)  | INFO   | RMATION FOR SEQ ID NO:7:   |    |
|      | (i)    | SEQUENCE CHARACTERISTICS:  (A) LENGTH: 16 base pairs  (B) TYPE: nucleic acid  (C) STRANDEDNESS: single  (D) TOPOLOGY: linear |    |
|      | (ii)   | MOLECULE TYPE: DNA (genomic)   |    |
|      | (xi)   | SEQUENCE DESCRIPTION: SEQ ID NO:7:   |    |
| TAG  | GGCCA' | TC CATTCT  | 16 |
| (2)  | INFO   | RMATION FOR SEQ ID NO:8:   |    |
|      | (i)    | SEQUENCE CHARACTERISTICS:  (A) LENGTH: 20 base pairs  (B) TYPE: nucleic acid  (C) STRANDEDNESS: single  (D) TOPOLOGY: linear |    |
|      | (ii)   | MOLECULE TYPE: DNA (genomic)   |    |
| eg a | (xi)   | SEQUENCE DESCRIPTION: SEQ ID NO:8:   |    |
| CCT  | ACCAT  | TG ACACTCTCAG  | 20 |
| (2)  | INFO   | RMATION FOR SEQ ID NO:9:   |    |
|      | (i)    | SEQUENCE CHARACTERISTICS:  (A) LENGTH: 21 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear    |    |
|      | (ii)   | MOLECULE TYPE: DNA (genomic)   |    |
|      | (xi)   | SEQUENCE DESCRIPTION: SEQ ID NO:9:   |    |
| TGT  | AACTA  | TT GGGAGGAAAG A  | 21 |
| (2)  | INFO   | RMATION FOR SEQ ID NO:10:  |    |
|      | (i)    | SEQUENCE CHARACTERISTICS:  (A) LENGTH: 21 base pairs  (B) TYPE: nucleic acid  (C) STRANDEDNESS: single  (D) TOPOLOGY: linear |    |
|      | (ii)   | MOLECULE TYPE: DNA (genomic)   |    |

|     | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:   |    |
|-----|--|----|
| TTC | GTGTAGGA CTCTCTAGTT T  | 21 |
| (2) | ) INFORMATION FOR SEQ ID NO:11:  |    |
|     | (i) SEQUENCE CHARACTERISTICS:  (A) LENGTH: 20 base pairs  (B) TYPE: nucleic acid  (C) STRANDEDNESS: single  (D) TOPOLOGY: linear   |    |
|     | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|     | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:   |    |
| GA' | TTTGAAAA TGAGCAGTCC  | 20 |
| (2  | ) INFORMATION FOR SEQ ID NO:12:  |    |
|     | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 20 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|     | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|     | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:   |    |
| GT  | CGGGCACT ACGTTTATCT  | 20 |
|     | A TAMPODARMION FOR GROUP NO.12.  |    |
| (2  | ) INFORMATION FOR SEQ ID NO:13:  |    |
|     | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 20 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|     | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|     | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:   |    |
| GC  | ACCAACAA CTTATCCCAA  | 20 |
| (2  | ) INFORMATION FOR SEQ ID NO:14:  |    |
|     | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 20 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|     | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|     | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:   |    |

| (2)  | ) INFORMATION FOR SEQ ID NO:15:  |    |
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|      | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 18 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|      | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|      | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:   |    |
| AGC: | CTTGTGCA TGTGTGCA  | 18 |
| (2)  | ) INFORMATION FOR SEQ ID NO:16:  |    |
|      | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 18 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> | ·  |
|      | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|      | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:   |    |
| CAA  | AAGTCCCA GCAGGTTC  | 18 |
| (2)  | ) INFORMATION FOR SEQ ID NO:17:  |    |
|      | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 18 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|      | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|      | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:   |    |
| AGC  | GCTGAACCC AATGGACT   | 18 |
| (2.) | 2) INFORMATION FOR SEQ ID NO:18:   |    |
|      | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 18 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|      | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|      | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:   |    |
| mmm  | THE THE COUNT CONTRACTOR .   | 18 |

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| NO:22: |
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| (2)     | INFORMATION FOR SEQ ID NO:23:  |    |
|---------|--|----|
|         | <ul><li>(i) SEQUENCE CHARACTERISTICS:</li><li>(A) LENGTH: 22 base pairs</li><li>(B) TYPE: nucleic acid</li><li>(C) STRANDEDNESS: single</li><li>(D) TOPOLOGY: linear</li></ul>       |    |
|         | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|         | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:   |    |
| AGCT    | TTTAACT TCCATGAGTT TC  | 22 |
| (2)     | INFORMATION FOR SEQ ID NO:24:  |    |
|         | <ul><li>(i) SEQUENCE CHARACTERISTICS:</li><li>(A) LENGTH: 21 base pairs</li><li>(B) TYPE: nucleic acid</li><li>(C) STRANDEDNESS: single</li><li>(D) TOPOLOGY: linear</li></ul>       |    |
|         | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|         | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:   |    |
| CTA     | ATCTCTG GTGCATAGTG A   | 21 |
| (2)     | INFORMATION FOR SEQ ID NO:25:  |    |
| (2)     |  |    |
|         | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 24 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|         | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|         | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:   |    |
| ጥርጥ፣    | TAGCAGT AATTGTCACT CCTT  | 24 |
| 101     |  |    |
| (2)     | INFORMATION FOR SEQ ID NO:26:  |    |
|         | <ul><li>(i) SEQUENCE CHARACTERISTICS:</li><li>(A) LENGTH: 20 base pairs</li><li>(B) TYPE: nucleic acid</li><li>(C) STRANDEDNESS: single</li><li>(D) TOPOLOGY: linear</li></ul>       |    |
|         | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|         | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:   |    |
| 7 C 7 S | ATACCATC CCATGGTTAT  | 20 |

| (2)   | INFORMATION FOR SEQ ID NO:27:  |    |
|-------|--|----|
|       | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 22 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|       | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|       | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:   |    |
| TCTC  | GTGATTT TGCCATTATG AG  | 22 |
| (2)   | INFORMATION FOR SEQ ID NO:28:  |    |
|       | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 25 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|       | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|       | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:   |    |
| TAA   | ACTGGAA TTTTTGACTA TGAGC   | 25 |
| (2)   | INFORMATION FOR SEQ ID NO:29:  |    |
|       | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 20 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|       | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|       | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:   |    |
| CTA   | AGGAGGC AACAGCAAAG   | 20 |
| (2)   | INFORMATION FOR SEQ ID NO:30:  |    |
|       | (i) SEQUENCE CHARACTERISTICS:  (A) LENGTH: 25 base pairs  (B) TYPE: nucleic acid  (C) STRANDEDNESS: single  (D) TOPOLOGY: linear   |    |
|       | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|       | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:   |    |
| 7 m.c | ምክአአርአር ጥርርጥልጥርጥር  | 25 |

| (2)  | INFORMATION FOR SEQ ID NO:31:  |    |
|------|--|----|
|      | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 24 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|      | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|      | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:   |    |
| TCAA | AGTAAGG CATTATTATA CAGA  | 24 |
| (2)  | INFORMATION FOR SEQ ID NO:32:  |    |
|      | (i) SEQUENCE CHARACTERISTICS:  (A) LENGTH: 20 base pairs  (B) TYPE: nucleic acid  (C) STRANDEDNESS: single  (D) TOPOLOGY: linear   |    |
|      | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|      | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:   |    |
| CCA  | CAAGCTG GACTGAGAAT   | 20 |
| (2)  | INFORMATION FOR SEQ ID NO:33:  |    |
| (2)  | (i) SEQUENCE CHARACTERISTICS:  (A) LENGTH: 20 base pairs  (B) TYPE: nucleic acid  (C) STRANDEDNESS: single  (D) TOPOLOGY: linear   |    |
|      | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|      | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:   |    |
| CTG  | AACAGGT TGAAGTGTCC   | 20 |
|      |  |    |
| (2)  | INFORMATION FOR SEQ ID NO:34:  |    |
|      | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 18 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|      | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|      | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:   |    |
| Сфф  | CGAATGC CTGAGGAC   | 18 |

| ( | (2)        | INFO  | RMATION FOR SEQ ID NO:35:  |    |
|---|------------|-------|--|----|
|   |            | (i)   | SEQUENCE CHARACTERISTICS:  (A) LENGTH: 20 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear    |    |
|   |            | (ii)  | MOLECULE TYPE: DNA (genomic)   |    |
|   |            | (xi)  | SEQUENCE DESCRIPTION: SEQ ID NO:35:  |    |
| ( | CTAF       | AGTCC | TC CACACTAGCC  | 20 |
|   | (2)        | INFO  | RMATION FOR SEQ ID NO:36:  |    |
|   |            | (i)   | SEQUENCE CHARACTERISTICS:  (A) LENGTH: 18 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear    |    |
|   |            | (ii)  | MOLECULE TYPE: DNA (genomic)   |    |
|   |            | (xi)  | SEQUENCE DESCRIPTION: SEQ ID NO:36:  |    |
| ( | CTA        | AAATG | GG AACAGGGC  | 18 |
|   | (2)        | TNFO  | RMATION FOR SEQ ID NO:37:  |    |
|   | (2)        |       | SEQUENCE CHARACTERISTICS:  (A) LENGTH: 18 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear    |    |
|   |            | (ii)  | MOLECULE TYPE: DNA (genomic)   |    |
|   |            | (xi)  | SEQUENCE DESCRIPTION: SEQ ID NO:37:  |    |
|   | TGC        |       | GT AACATCTG  | 18 |
|   |            |       |  |    |
|   | (2)        |       | RMATION FOR SEQ ID NO:38:  |    |
|   |            | (i)   | SEQUENCE CHARACTERISTICS:  (A) LENGTH: 22 base pairs  (B) TYPE: nucleic acid  (C) STRANDEDNESS: single  (D) TOPOLOGY: linear |    |
|   |            | (ii)  | MOLECULE TYPE: DNA (genomic)   |    |
|   |            | (xi)  | SEQUENCE DESCRIPTION: SEQ ID NO:38:  |    |
|   | $CC\Delta$ | АССАТ | PAA AGTATTTGTG TC  | 22 |

| (2) INFORMATION FOR SEQ ID NO:39:  |     |
|--|-----|
| <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 24 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |     |
| (ii) MOLECULE TYPE: DNA (genomic)  |     |
| (xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:   |     |
| AGCTGAGAAA TGCCTTCTAT AAAT   | 24  |
| (2) INFORMATION FOR SEQ ID NO:40:  |     |
| <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 18 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |     |
| (ii) MOLECULE TYPE: DNA (genomic)  |     |
| (xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:   | • . |
| GAGGGCCACC TTGATAGT  | 18  |
|  |     |
| (2) INFORMATION FOR SEQ ID NO:41:  |     |
| <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 23 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |     |
| (ii) MOLECULE TYPE: DNA (genomic)  |     |
| (xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:   |     |
| AGCTTCATAC ACTGAAATTG TTG  | 23  |
|  |     |
| (2) INFORMATION FOR SEQ ID NO:42:  |     |
| (i) SEQUENCE CHARACTERISTICS:  (A) LENGTH: 17 base pairs  (B) TYPE: nucleic acid  (C) STRANDEDNESS: single  (D) TOPOLOGY: linear   |     |
| (ii) MOLECULE TYPE: DNA (genomic)  |     |
| (xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:   |     |
| CA CCCCAAA CCCCCAC   | 17  |

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| (2) | INFORMATION FOR SEQ ID NO:43:  |    |
|     | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 20 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|     | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|     | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:   |    |
| GTG | GCCAAG ATGGCACTAC  | 20 |
| (2) | INFORMATION FOR SEQ ID NO:44:  |    |
|     | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 20 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|     | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|     | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:   |    |
| GCC | AGCAATA ATGGGAAGTT   | 20 |
| 121 | INFORMATION FOR SEQ ID NO:45:  |    |
| (2) |  |    |
|     | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 22 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|     | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|     | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:45:   |    |
| ጥርር | TAGTACC CCTGGATACC TG  | 22 |
| 100 | Mondo corocinios is  |    |
| (2) | INFORMATION FOR SEQ ID NO:46:  |    |
|     | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 24 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|     | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|     | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:46:   |    |
| AAT | CTTTGTG GATATGGCTC TGCT  | 24 |

| (2)  | INFO  | RMATION FOR SEQ ID NO:47:  |    |
|------|-------|--|----|
|      | (i)   | SEQUENCE CHARACTERISTICS:  (A) LENGTH: 20 base pairs  (B) TYPE: nucleic acid  (C) STRANDEDNESS: single  (D) TOPOLOGY: linear |    |
|      | (ii)  | MOLECULE TYPE: DNA (genomic)   |    |
|      | (xi)  | SEQUENCE DESCRIPTION: SEQ ID NO:47:  |    |
| TTGT | TATCA | GG GATTTGGTTA  | 20 |
| (2)  | INFO  | RMATION FOR SEQ ID NO:48:  |    |
|      | (i)   | SEQUENCE CHARACTERISTICS:  (A) LENGTH: 20 base pairs  (B) TYPE: nucleic acid  (C) STRANDEDNESS: single  (D) TOPOLOGY: linear |    |
|      | (ii)  | MOLECULE TYPE: DNA (genomic)   |    |
|      | (xi)  | SEQUENCE DESCRIPTION: SEQ ID NO:48:  |    |
| TGT  | GTCG  | CT TCAGTACATA  | 20 |
| (2)  | INFO  | RMATION FOR SEQ ID NO:49:  |    |
| ,    |       | SEQUENCE CHARACTERISTICS:  (A) LENGTH: 18 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear    |    |
|      | (ii)  | MOLECULE TYPE: DNA (genomic)   |    |
|      | (xi)  | SEQUENCE DESCRIPTION: SEQ ID NO:49:  |    |
| GAT  | CCGTC | AC ATAATGGC  | 18 |
| (2)  | INFO  | RMATION FOR SEQ ID NO:50:  |    |
|      | (i)   | SEQUENCE CHARACTERISTICS:  (A) LENGTH: 18 base pairs  (B) TYPE: nucleic acid  (C) STRANDEDNESS: single  (D) TOPOLOGY: linear | ٠  |
|      | (ii)  | MOLECULE TYPE: DNA (genomic)   |    |
|      | (xi)  | SEQUENCE DESCRIPTION: SEQ ID NO:50:  |    |
|      |       | CO MUNICIPACIO   | 10 |

| (2) INFORMATION FOR SEQ ID NO:51:  |    |
|--|----|
| <ul><li>(i) SEQUENCE CHARACTERISTICS:</li><li>(A) LENGTH: 20 base pairs</li><li>(B) TYPE: nucleic acid</li><li>(C) STRANDEDNESS: single</li><li>(D) TOPOLOGY: linear</li></ul> |    |
| (ii) MOLECULE TYPE: DNA (genomic)  |    |
| (xi) SEQUENCE DESCRIPTION: SEQ ID NO:51:   |    |
| AAACATAGTG CTCTGGAGGC  | 20 |
| (2) INFORMATION FOR SEQ ID NO:52:  |    |
| <ul><li>(i) SEQUENCE CHARACTERISTICS:</li><li>(A) LENGTH: 20 base pairs</li><li>(B) TYPE: nucleic acid</li><li>(C) STRANDEDNESS: single</li><li>(D) TOPOLOGY: linear</li></ul> |    |
| (ii) MOLECULE TYPE: DNA (genomic)  |    |
| (xi) SEQUENCE DESCRIPTION: SEQ ID NO:52:   |    |
| GGGCTAACAA CAGTGTCTGC  | 20 |
| (2) INFORMATION FOR SEQ ID NO:53:  |    |
| <ul><li>(i) SEQUENCE CHARACTERISTICS:</li><li>(A) LENGTH: 20 base pairs</li><li>(B) TYPE: nucleic acid</li><li>(C) STRANDEDNESS: single</li><li>(D) TOPOLOGY: linear</li></ul> |    |
| (ii) MOLECULE TYPE: DNA (genomic)  |    |
| (xi) SEQUENCE DESCRIPTION: SEQ ID NO:53:   |    |
| CACTCCAGCC TAAGGAACAC  | 20 |
| (2) INFORMATION FOR GEO ID NO. 54.   |    |
| (2) INFORMATION FOR SEQ ID NO:54:  |    |
| <ul><li>(i) SEQUENCE CHARACTERISTICS:</li><li>(A) LENGTH: 23 base pairs</li><li>(B) TYPE: nucleic acid</li><li>(C) STRANDEDNESS: single</li><li>(D) TOPOLOGY: linear</li></ul> |    |
| (ii) MOLECULE TYPE: DNA (genomic)  |    |
| (xi) SEQUENCE DESCRIPTION: SEQ ID NO:54:   |    |
| TGTCAAAGAT GGCTTTTATT ACC  | 23 |

| (2) INFORMATION FOR SEQ ID NO:55:  |    |
|--|----|
| <ul><li>(i) SEQUENCE CHARACTERISTICS:</li><li>(A) LENGTH: 25 base pairs</li><li>(B) TYPE: nucleic acid</li><li>(C) STRANDEDNESS: single</li><li>(D) TOPOLOGY: linear</li></ul>   |    |
| (ii) MOLECULE TYPE: DNA (genomic)  |    |
| (xi) SEQUENCE DESCRIPTION: SEQ ID NO:55:   |    |
| AAGAGTAAAA CTCCGTCACA AACAC  | 25 |
| (2) INFORMATION FOR SEQ ID NO:56:  |    |
| <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 24 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul>   |    |
| (ii) MOLECULE TYPE: DNA (genomic)  |    |
| (xi) SEQUENCE DESCRIPTION: SEQ ID NO:56:   |    |
| AGATTTGAGT CTCTGCACAG TAAG   | 24 |
| (2) INFORMATION FOR SEQ ID NO:57:  |    |
| <ul><li>(i) SEQUENCE CHARACTERISTICS:</li><li>(A) LENGTH: 17 base pairs</li><li>(B) TYPE: nucleic acid</li><li>(C) STRANDEDNESS: single</li><li>(D) TOPOLOGY: linear</li></ul>   |    |
| (ii) MOLECULE TYPE: DNA (genomic)  |    |
| (xi) SEQUENCE DESCRIPTION: SEQ ID NO:57:   |    |
| AATTCTGCTC ATTGGGG   | 17 |
| 70 JUL 10 |    |
| (2) INFORMATION FOR SEQ ID NO:58:  |    |
| <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 20 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul>   | •  |
| (ii) MOLECULE TYPE: DNA (genomic)  |    |
| (xi) SEQUENCE DESCRIPTION: SEQ ID NO:58:   |    |
| GGATATTTTG GAACTGCACT  | 20 |

| (2) | INFORMATION FOR SEQ ID NO:59:  |    |
|-----|--|----|
|     | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 24 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|     | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|     | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:59:   |    |
| AAG | CATCAAA GTGTAACTCA GACC  | 24 |
| (2) | INFORMATION FOR SEQ ID NO:60:  |    |
|     | (i) SEQUENCE CHARACTERISTICS:  (A) LENGTH: 20 base pairs  (B) TYPE: nucleic acid  (C) STRANDEDNESS: single  (D) TOPOLOGY: linear   |    |
|     | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|     | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:60:   |    |
| TTG | GAGCCTG TGTATGTGTG   | 20 |
| (2) | INFORMATION FOR SEQ ID NO:61:  |    |
| (2) |  |    |
|     | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 17 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|     | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|     | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:61:   |    |
| GGT | GCTGCCT CCTAACA  | 17 |
|     |  |    |
| (2) | INFORMATION FOR SEQ ID NO:62:  |    |
|     | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 17 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|     | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|     | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:62:   |    |
| CGA | AGCCCTTC TGAAACA   | 17 |
|     |  |    |

| (2)        | INFORMATION FOR SEQ ID NO:63:  |    |
|------------|--|----|
|            | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 20 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|            | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|            | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:63:   |    |
| CTG        | STATGGCC TCAGTCTCGG  | 2  |
|            |  |    |
| (2)        | INFORMATION FOR SEQ ID NO:64:  |    |
|            | <ul> <li>(i) SEQUENCE CHARACTERISTICS:</li> <li>(A) LENGTH: 20 base pairs</li> <li>(B) TYPE: nucleic acid</li> <li>(C) STRANDEDNESS: single</li> <li>(D) TOPOLOGY: linear</li> </ul> |    |
|            | (ii) MOLECULE TYPE: DNA (genomic)  |    |
|            | (xi) SEQUENCE DESCRIPTION: SEQ ID NO:64:   |    |
| <b>AGC</b> | የምርጥርጥርር ርርልኔርጥርርርጥ  | 21 |